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Dean at NTU's Lee Kong Chian School of Medicine big on healthcare technology



Professor Joseph Sung's view is that technology, though important, will not take over the humanity in medicine. ST PHOTO: NG SOR LUAN



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SINGAPORE - The dean of the Lee Kong Chian School of Medicine (LKC Medicine) at Nanyang Technological University (NTU), Professor Joseph Sung, is big on using technology – from artificial intelligence (AI) to robotics – to transform healthcare.

The 62-year-old believes this is the way to achieve good population health, particularly in Singapore where people are ageing and there is a shortage of healthcare workers.

<https://www.straitstimes.com/singapore/health/new-dean-at-ntus-lee-kong-chian-school-of-medicine-big-on-healthcare-technology>

While some people, including patients and doctors, may be hesitant about embracing technology in healthcare, Prof Sung's view is that technology, though important, will not take over the humanity in medicine.

This is something he constantly stresses to his students, going by his monthly blog posts on the school's website.

In a Jan 4 blog, posted after he returned from a trip to Hong Kong - his first visit home to see his wife and two daughters, both doctors, since he arrived about 10 months earlier - Prof Sung encapsulated his thoughts on using AI and machine learning in healthcare.

"With the advent of AI-assisted medicine, doctors have an additional role to play. On the one hand, we need to learn to 'trust' the machine that is smarter and faster than us, but know when to exercise discretion of human intelligence," he wrote.

On the other hand, doctors have to guide their patients in trusting the diagnosis, prognostication and management interventions made by the machine. It is like sitting with the patient in a driverless car, and having access to the steering wheel and brake pedal, to use when needed, he wrote.

A gastroenterologist and former academic leader in Hong Kong - he is the former vice-chancellor of The Chinese University of Hong Kong - Prof Sung has won numerous awards and published scores of scientific papers. He is also NTU's senior vice-president of health and life sciences studies.

When he first reported for work as dean-designate on March 1, 2021, the first person he went to meet was Professor Louis Phee, the dean of NTU's College of Engineering.

"I told him that one of the main reasons I moved from Hong Kong to Singapore is (that there is) a lot of potential to develop the technology in healthcare," he said in an interview he gave at the school's Novena campus late last year.

Singapore is very enthusiastic about the use of tech in healthcare, he believes. How can technology, particularly AI and robots, be used to help elderly people to better look after themselves?

If they have to monitor their own chronic condition, can that be done at home so that they can avoid going to the hospital?

These are some of the questions he hopes to help address at the school, which he formally took over as dean from Professor James Best on April 1, 2021.

LKC Medicine, which took in its first batch of students in 2013, is a partnership between NTU and Imperial College London.

In his time here, Prof Sung said he hopes to help the school - and Singapore - shine in medical research, witness how tech can make healthcare more effective, safe and affordable, and groom the next generation of doctors.

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The tech possibilities are many, including sensors in the home that can detect movements and warn doctors if there are none. He said his colleagues at the engineering college have developed sensors, which can be woven into the fabrics of socks or shoes to detect whether a person wearing it is walking normally or not.

For instance, if abnormal walking patterns such as a shuffling gait is picked up, that can help doctors detect early Parkinson's disease, he said.

Prof Sung also hopes that the young doctors the school produces are tech savvy and yet, will not forget to see the patient as a person, and not a disease or condition.

In one of his blog posts in 2021, he wrote that in many patients, there is often a psychological ailment behind their sickness.

"Can you see it? Are you willing to heal, not just the diseased body, but also the injured soul?"

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Prof Sung was hailed as an Asian Hero by Time Magazine for his role in battling the Sars (severe acute respiratory syndrome) epidemic in Hong Kong back in 2003 - an accolade that he brushed aside, saying "that was a long time ago".

He has more urgent matters on his hands for sure. Like while he is sure that technology is going to help transform healthcare, he recognises that the hurdles are massive.

"First of all, how do you gain the trust of doctors, whom you need to convince before the patients?" he said.

And then, there is the cost.

"You can have very expensive technology, which works but nobody can afford to use it...," he added.

"We don't want healthcare to be delivered only to the wealthy so it's very important to make it cost effective. We want equity in healthcare."

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